

written by a transducer head adjacent the disk in angularly extending sectors on concentric data tracks to be subsequently read therefrom by the transducer; a controller responsive to sector location pulses for locating said sectors; and means for moving the transducer head between tracks on the disk; an apparatus for providing the sector location pulses, comprising:

master clock means synchronized with the rotation rate of the disk for providing master clock signals indicative of the angular location of the transducer head with respect to a selected index location on the disk following passage of the index location by the transducer head;

a first counter clocked by the clock means;

latch means for storing [at least one] a selected time corresponding to a selected angular distance along a selected track on the disk;

an accumulator connected to the latch means for adding said selected time to the contents of the accumulator each time the accumulator is clocked by an accumulator clock signal;

a first comparator connected to the first counter and the accumulator for providing an electrical indication that the contents of the counter is at least as large as the contents

of the accumulator;

accumulator clock means connected to the first comparator and responsive to said electrical indication for repetitively providing the accumulator clock signal to the accumulator so long as the accumulator contents does not exceed the first counter contents;

master reset means for resetting the first counter and the accumulator at such times that the index location on the disk passes the transducer head;

partial reset means for entering the selected time[s] into the latch means and resetting the accumulator each time the transducer head is moved to a new track on the disk; and

sector location pulse generation means, connected to the first comparator, for providing the sector location pulses to the controller [concurrently with selected accumulator clock pulses] in response to at least selected ones of said electrical indications that the contents of the first counter is at least as large as the contents of the accumulator.

In claim 2, at line 17, please insert before the word "sector", the word --the--.

Please amend claim 3 as follows:

a² 3. (Amended) The apparatus of claim 2 wherein the latch means is further characterized as a means for storing a plurality of numbers corresponding to selected angular distances along a selected track of the disk and wherein the latch means comprises:

a sector time latch for storing sector times
corresponding to angular lengths of sectors on
the tracks;

a delay time latch for storing delay times
corresponding to selected angular skew
distances of the sectors along tracks of the
disk; and

an accumulation time selector connected between the
accumulator and the sector and delay time
latches for presenting sector times to the
accumulator in an enabled state of the
selector and for presenting the delay times to
the accumulator in a disabled state of the
selector whereby the selected time added to
the contents of the accumulator in response to
clocking of the accumulator by an accumulator
clock pulse is a sector time at such times
that the accumulation clock pulse occurs while
the accumulation time selector is enabled and

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is a delay time at such times that the
accumulator clock pulse occurs while the
accumulation time selector is disabled; and
wherein the apparatus is further characterized as
comprising delayed index controller means for disabling
the accumulation time selector and the sector location
[location] pulse gate for the first accumulation clock ✓
signal following reset of the accumulator.

In claim 4, at line 3, please delete "controller"
and substitute therefor --sector location--.

In claim 5, at line 3, please delete "controller"
and substitute therefor --sector location--.

In claim 6, at line 3, please delete "controller"
and substitute therefor --sector location--.

Please amend claim 7 as follows:

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7. (Amended) The apparatus of claim 1 wherein the
latch means is further characterized as a means for
storing a plurality of numbers corresponding to selected
angular distances along a selected track of the disk and
wherein the latch means comprises:

a sector time latch for storing sector times
corresponding to angular lengths of sectors on
the tracks;

a delay time latch for storing delay times corresponding to selected angular skew distances of the sectors along tracks of the disk; and

an accumulation time selector connected between the accumulator and the sector and delay time latches for presenting sector times to the accumulator in an enabled state of the selector and for presenting the delay times to the accumulator in a disabled state of the selector whereby the selected time added to the contents of the accumulator in response to clocking of the accumulator by an accumulator clock pulse is a sector time at such times that the accumulation clock pulse occurs while the accumulation time selector is enabled and is a delay time at such times that the accumulator clock pulse occurs while the accumulation time selector is disabled;

wherein the sector location pulse generation means comprises:

a sector location pulse gate connected to the first comparator to receive said electrical indication of the relative contents of the first counter and the accumulator; and

means for generating a sector location pulse each time the sector location pulse gate is enabled; and

wherein the apparatus is further characterized as comprising delayed index controller means for disabling the accumulation time selector and the sector location [location] pulse gate for the first accumulator clock signal following reset of the accumulator.

In claim 8, at line 3, please delete "controller" and substitute therefore --sector location--.

Please cancel claim 9 and substitute therefore claim 16 as follows:

21 9 ~~16~~. (New) A method for generating sector location pulses for locating data storage sectors on data tracks of a rotating disk data storage device having a transducer head adjacent the surface of a rotating disk for writing to and reading from the data storage sectors, comprising the steps of:

maintaining a continuous count of a time from index following passage of a selected index location on the disk by the transducer head;

maintaining an accumulation of sector times, each sector time equal to the time required for a data storage sector to pass the transducer

head along a selected track, following passage of the index location by the transducer head; adding a sector time to said accumulation of sector times each time the time from index attains a value at least as large as the accumulation of sector times;

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generating a sector location pulse each time the time from index attains a value at least as large as the accumulation of sector times; setting the accumulation of sector times to zero each time the transducer head is moved to a new track on the disk; and repetitively accumulating sector times following movement of the transducer head to a new track on the disk until the accumulation of sector times exceeds the time from index.

In claim 10, /at line 1, please delete the numeral "9" and substitute therefor the numeral --16--.

In claim 10, /at line 9, please delete "controller" and substitute therefor --sector location--.

In claim 10, at line 17, please delete "mark" and substitute therefor --location--.

In claim 10, at line 17, following "and", please insert --the location of--.

In claim 11, at line 3, please delete "next" and substitute therefor --accumulation of--.

In claim 11, at line 3, please delete "mark" and substitute therefor --location--.

In claim 12, at line 2, please delete "controller" and substitute therefor --sector location--.

In claim 12, at line 3, please delete "controller" and substitute therefor --sector location--.

Please amend claim 13 as follows:

92- 13. (Amended) The method of claim [9] ⁹~~16~~ further comprising the step of accumulating a delayed index time to be added to the [next] accumulation of sector times each time the index [mark] location on the disk passes the transducer head and each time the transducer head is moved to a new track on the disk.

In claim 14, at line 2, please delete "controller" and substitute therefor --sector location--.

In claim 14, at line 3, please delete "controller" and substitute therefor --sector location--.

In claim 15, at line 1, please delete the numeral "9" and substitute therefor the numeral --16--.

In claim 15, at line 2, please delete "controller" and substitute therefor --sector location--.

In claim 15, at line 3, please delete "controller" and substitute therefor --sector location--.

In the Drawings:

Three sheets of red line drawings are submitted for approval by the Examiner, as follows:

Sheet 4 and Sheet 5: In Figures 5 and 7 approval is requested for the retention of the Greek symbol ϕ . As explained in the Remarks section hereof, this is not a numeral "0" (as required by the PTO Form 948).

Sheet 6: In Figure 9 approval is requested for deletion of the numeral 222 and the lead line as indicated in red.